

Abstract of the Disclosure

A passivation layer of AlN is deposited on a GaN channel HFET using molecular beam epitaxy (MBE). Using MBE, many other surfaces may also be coated with AlN,
5 including silicon devices, nitride devices, GaN based LEDs and lasers as well as other semiconductor systems. The deposition is performed at approximately 150°C and uses alternating beams of aluminum and remote plasma RF nitrogen to produce an approximately 500Å thick AlN layer.

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